

Normalization of p-Carbon Polarimeters

Dmitri Smirnov

for the CNI polarimetry group

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Some Facts

- Polarization

$$P = \frac{\epsilon}{A_N}$$

- For p-Carbon (100 and 255 GeV beam energies) we use A_N determined at 100 GeV in 2004
- Currently, the p-Carbon numbers (both online and offline) are scaled using the last year normalization to H-Jet
- New normalization to H-Jet is available at:
 - <http://www.phy.bnl.gov/cnipol/summary/>
- If we change normalization now the p-Carbon numbers will increase by $\sim 5\%$ relative

Average Polarization

	Run 12, 100 GeV				Run 12, 255 GeV			
	Injection		Flattop		Injection		Flattop	
	Blu	Yel	Blu	Yel	Blu	Yel	Blu	Yel
H-Jet			61	57			52	52
B1U	63		59		60		51	
B2D (!)	55		52		56		44	
Y2U		62		57		61		53
Y1D		62		56		58		50

- p-Carbon numbers are based on the 2004 A_N at 24 GeV and 100 GeV
- After the noise clean up the numbers are more consistent
- Some unpolarized noise may still be leaking in the signal region

Average Polarization Profile Ratio R

	Run 12, 100 GeV				Run 12, 255 GeV			
	Injection		Flattop		Injection		Flattop	
	Blu	Yel	Blu	Yel	Blu	Yel	Blu	Yel
H-Jet								
B1U	0.06		0.09		0.04		0.22	
B2D (!)	0.05		0.09		0.03		0.18	
Y2U				0.09				0.17
Y1D				0.09				0.14

- Numbers for yellow at 24 GeV are questionable